M141 Bunker Defeat Munition

New Equipment Training

DOD Instructor POC info

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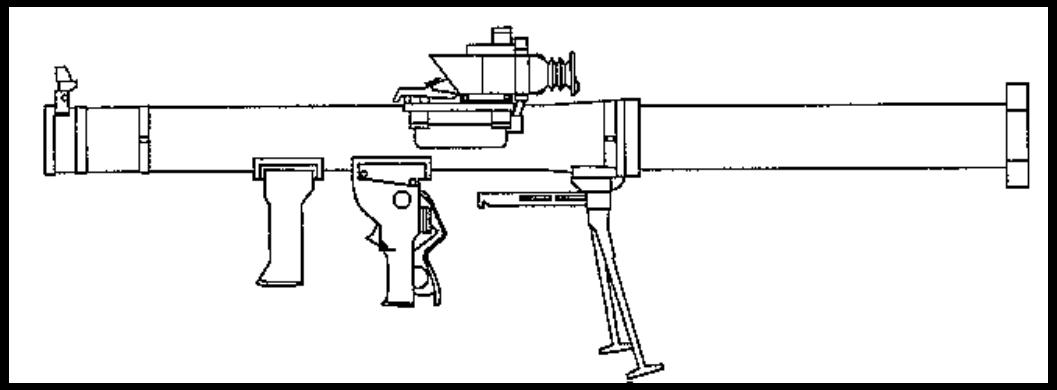
M141 BDM

Bunker Defeat Munition

formerly known as (SMAW-D)

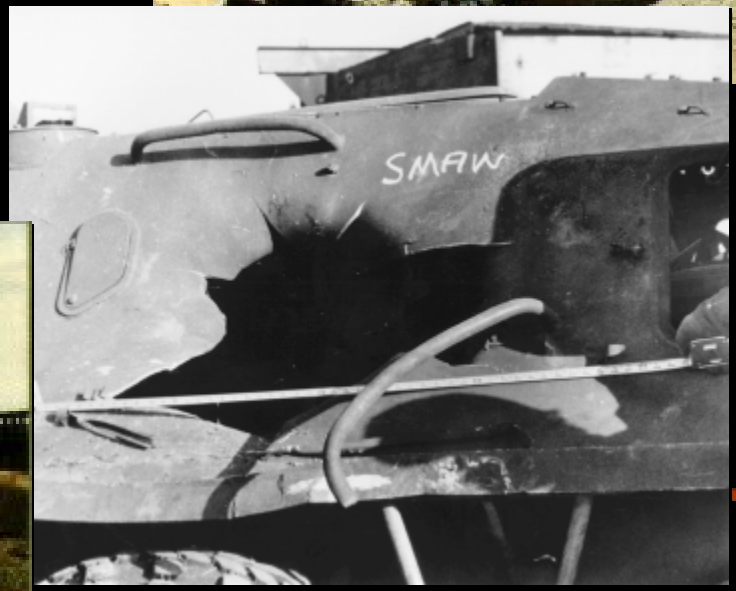


M141 BDM

- BDM is a disposable
- Lightweight, self-contained, man-portable, shoulder-fired, high-explosive, multipurpose weapon
- Unguided free-flight rocket
- Telescoping launcher that also serves as the storage container.
- Water resistant protection for the rocket during weapon storage, transportation, and use.
- No maintenance
- Only be fired from the gunner’s right shoulder.
- 31” Carry length.

M141 BDM

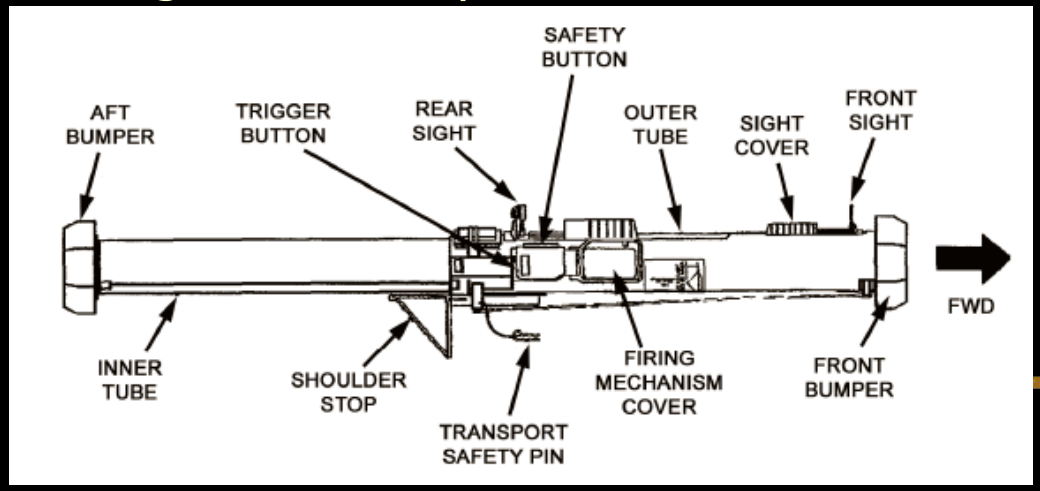
- Effective Range 15 to 300 meters.
- Destroy hardened targets,
  - Light armored vehicles
  - Bunkers and other fixed enemy positions, and incapacitate the enemy personnel located within these targets.
  - Double-reinforced concrete walls up to 8 inches thick,
  - Triple brick s… standard ea… bunkers.



M141 Outer Tube

The outer tube is complete with:

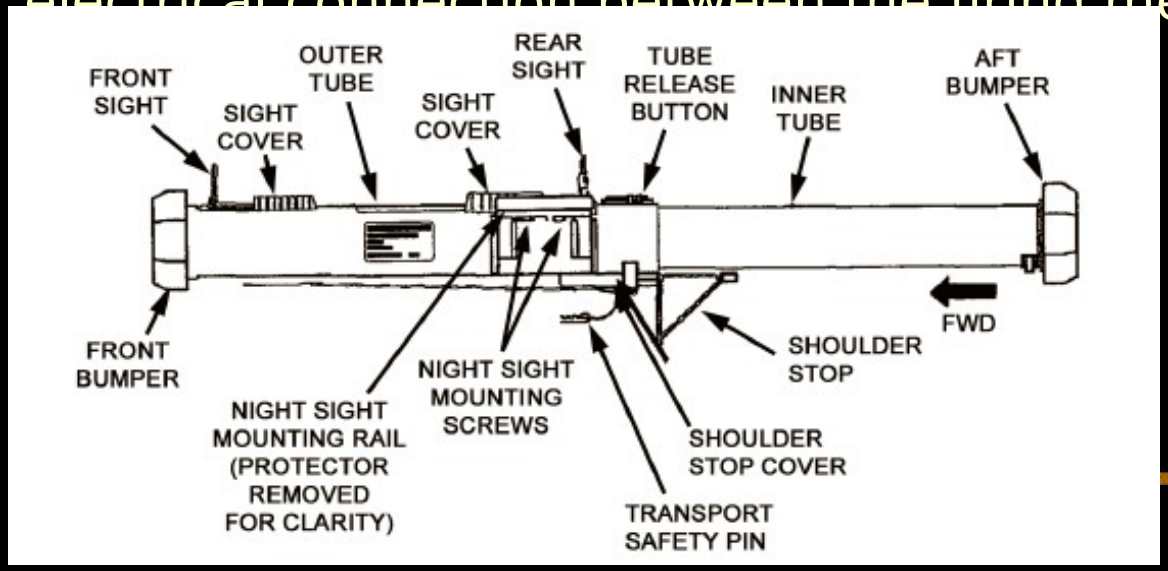
- Carry sling,
- Front and rear rifle-type sight assemblies,
- Firing mechanism,
- Shoulder stop,
- NVD mounting rail.
- Bumpers at each launcher tube end to prevent weapon damage during handling and transportation.



M141 Inner Tube

The inner tube can be extended to the ready-to-fire position by:

- Removing the transportation locking pin and pressing the tube detent button.
- The inner and outer tubes are locked together for firing by rotating the inner tube clockwise, which also completes an electrical connection between the firing mechanism and



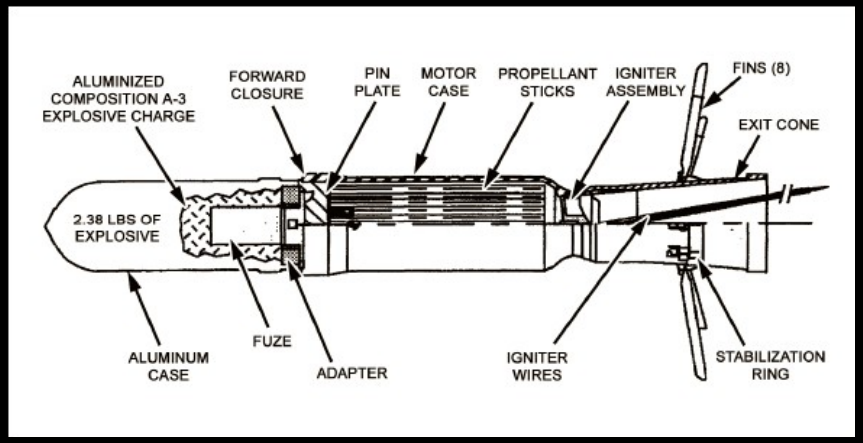
M141 Rocket

- The M141 BDM utilizes the 83-mm high-explosive (2.38 lbs), dual-mode assault rocket.
- The dual-mode rocket consists of three major components:
  - a high-explosive warhead
  - a dual-mode fuze
  - rocket motor
- Warhead function, in quick or delay mode, is automatically determined by the fuze when the rocket impacts a target.

- The M141 BDM is fired at hard or soft targets without any selection steps required by the gunner. This automatic feature assures that the most effective kill mechanism is employed.

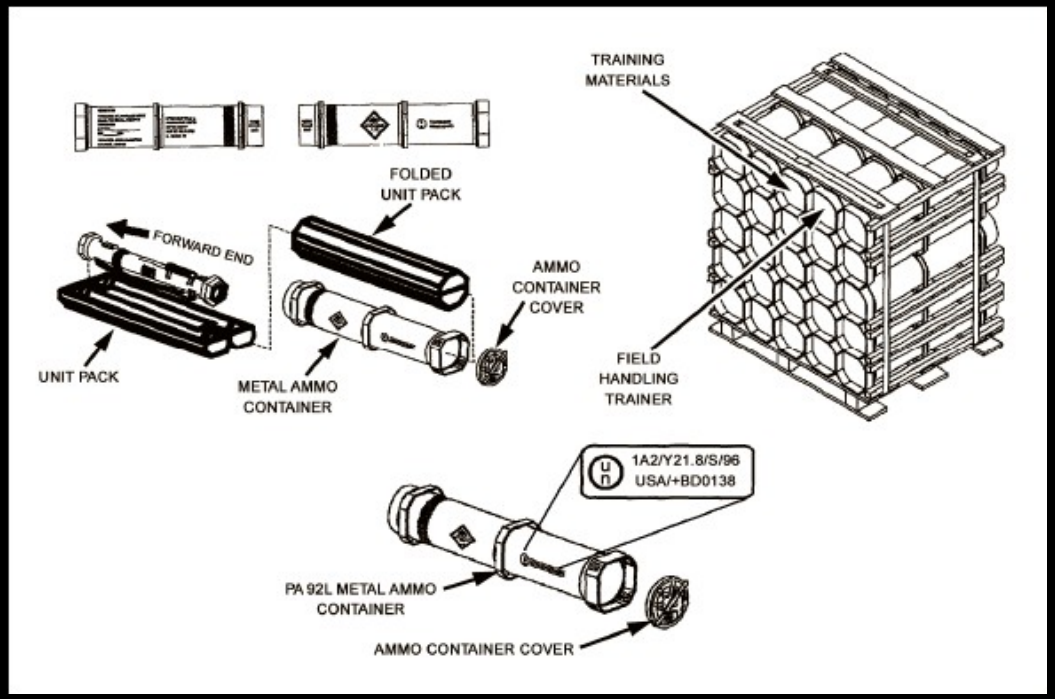
M141 Rocket

- The rocket is ignited by electrical power from the launcher firing mechanism. This signal initiates an electric match in the igniter, which in turn ignites the rocket motor propellant.
- The rocket motor propellant is completely burned out before the rocket leaves the muzzle of the launcher, which protects the gunner from adverse propellant exhaust effects.
- As the rocket leaves the launcher muzzle, eight spring-loaded fins automatically deploy to aerodynamically stabilize the rocket in flight (low-roll rate).



M141 Packaging

- The M141 BDM will usually be delivered to the supply point in a palletized configuration.
- It comes encased in a folding unit pack which in turn is encased in a metal ammunition container.

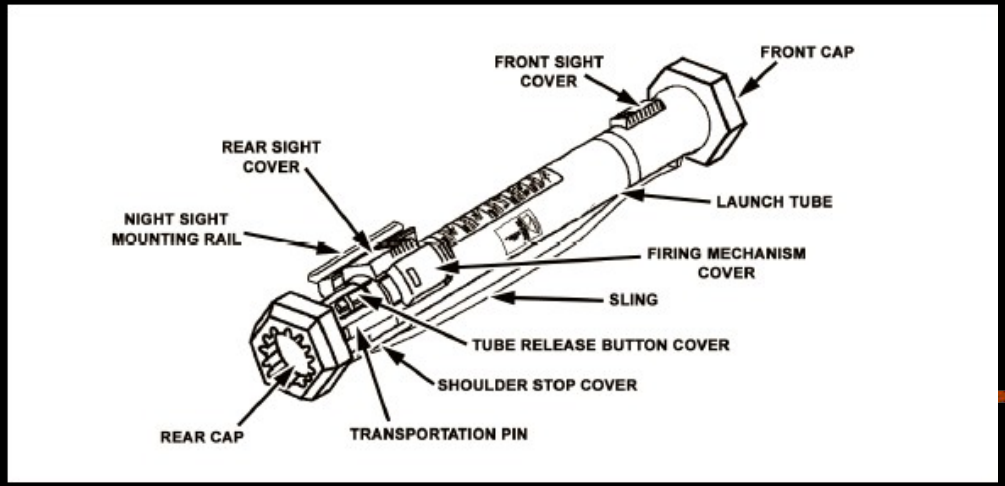


M141 Packaging

- The metal ammunition container should be inspected for damage.
- If the container has been punctured or damaged, notify a supervisor.
- The container should also be inspected for correct markings, including the serial number and bar code on the end of container.
- To unpack the M141 BDM, remove the metal ammunition container cover and remove the unit pack from the container.
- Open the unit pack and remove the weapon.

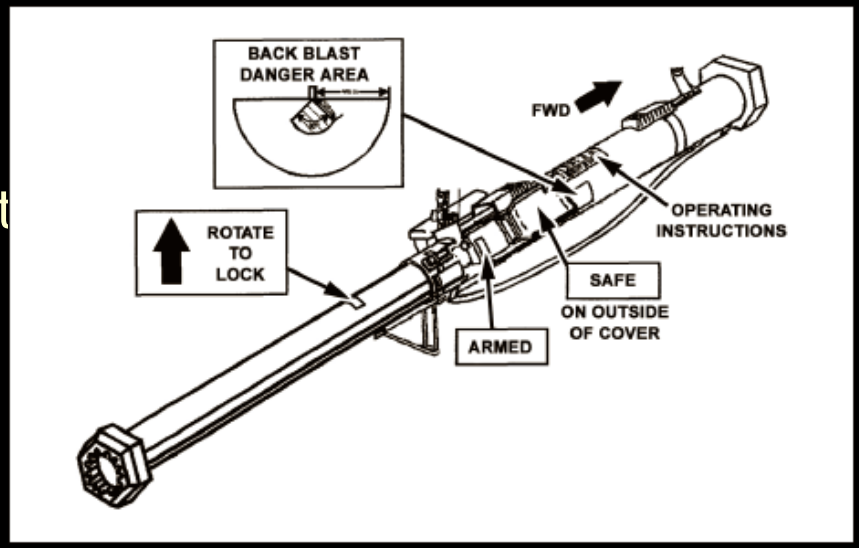
M141 Inspection

- Inspect the body for dents, cracks, gouges, or holes.
- Ensure the front and rear caps are present and there are no holes, tears or punctures.
- Ensure the front sight cover, rear sight cover, firing mechanism cover, tube release button cover, and shoulder stop cover are all present and not damaged.
- Ensure the front and rear sights and the shoulder strap are present and not damaged.
- Inspect the sling for signs of fraying.
- Gently shake the weapon and listen for sounds of loose or broken material inside the tube.



M141 Markings

- Each M141 BDM has labels and markings that provide:
  - operating instructions
  - backblast danger zone dat
  - safe, armed, and lock indications.

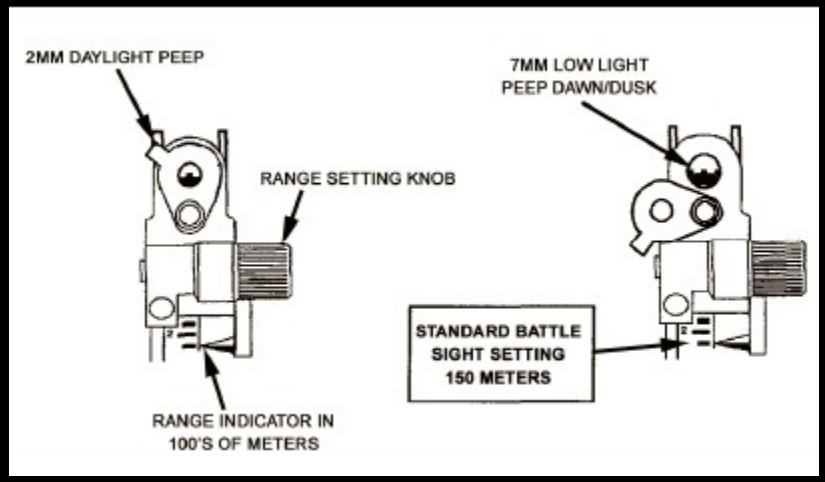


M141 Front Sight

- The front sight is a rifle-type sight that has three posts:
  - a central post for engaging stationary targets, or moving targets head-on or straight away
  - two side posts to assist in engaging targets moving from the left or right
- The front sight contains a white semicircle mark that will match the curve of the rear sight peep when properly aligned to assist in proper aiming.

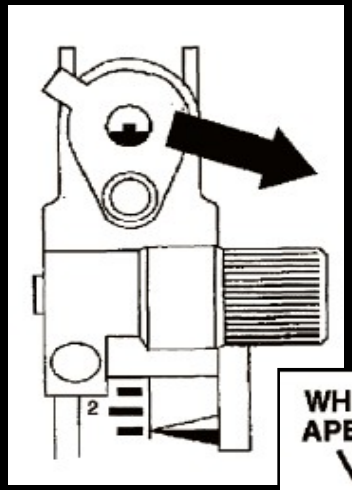
M141 Rear Sight

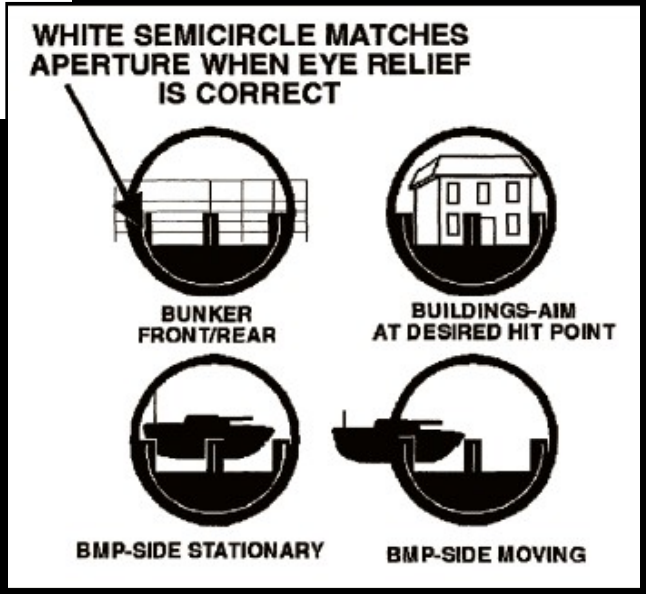
- The rear sight consists of a 2-mm peep for use under normal daylight conditions and a 7-mm aperture for use under low light or flare illumination conditions.
- The rear sight is pre-set to open at the 150-meter battle sight range setting, and is adjustable in 50-meter increments out to 500 meters.



M141 Sight Picture

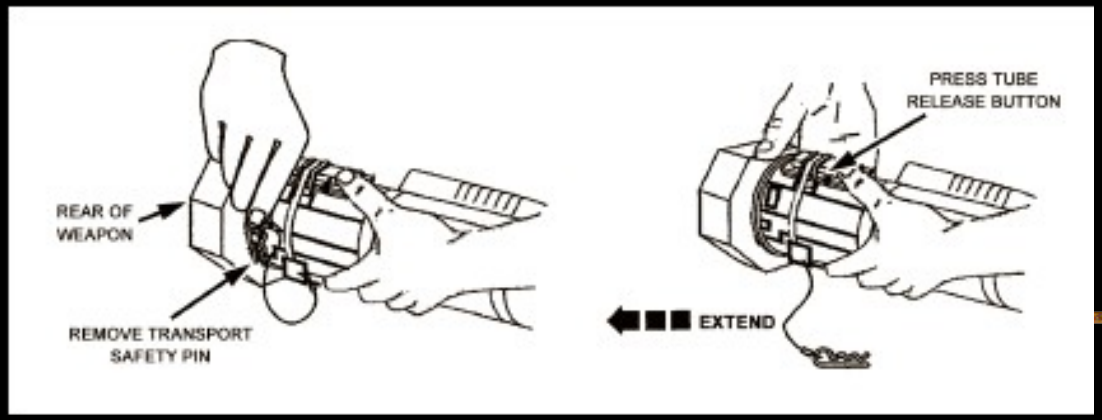
- To aim the M141 BDM:
  - set the correct range on the rear sight, then sight through it.
  - place the top of the middle front sight post in the center of the rear sight aperture.
  - place the middle post on the center of mass of the target. The gunner’s eye should be 8 to 9 inches from the rear sight when the weapon is properly positioned for firing.
  - the white semicircle on the front sight will match the curve of the rear sight peep when the gunner is in the correct position.




WHITE SEMICIRCLE MATCHES APERTURE WHEN EYE RELIEF IS CORRECT
BUNKER FRONT/REAR
BUILDINGS-AIM AT DESIRED HIT POINT
BMP-SIDE STATIONARY
BMP-SIDE MOVING

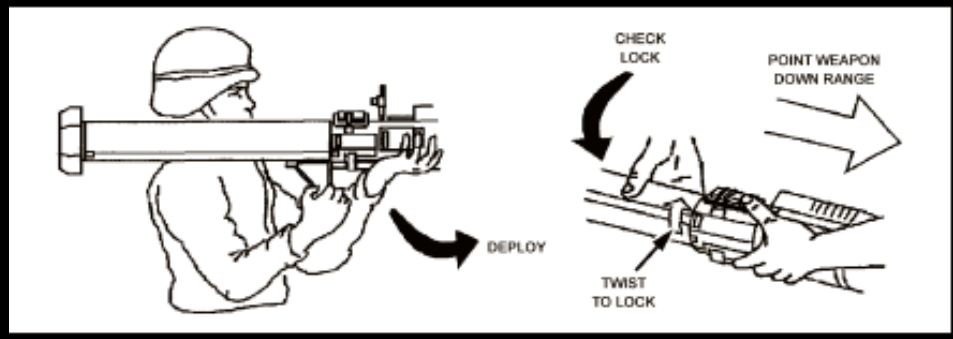
M141 Operation and Function

- Place the rocket launcher in the ready-to-fire position.
  - Keeping the weapon muzzle pointed downrange, face to the rear and place the weapon under your left arm.
  - Remove the transportation locking pin by pulling the lanyard or pin body.
  - Depress the tube release button with your left thumb, grasp the rear tube (inner tube) just in front of the end cap with your right hand, and extend the inner tube rearward until it stops.
  - A yellow band is visible at the inner tube front end when the tube is fully extended. Release the tube release button.



M141 Operation and Function

- Rotate the inner tube clockwise (in the direction of the arrow) until it locks.
- Verify the inner tube is locked by attempting to rotate the inner tube counterclockwise (opposite to the arrow).
- The launcher is now in the ready-to-fire position.

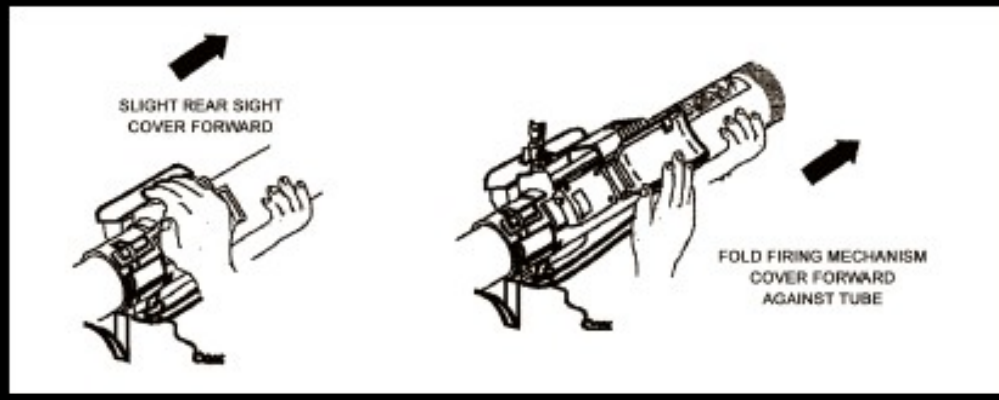


If the tubes are not locked, the weapon will not arm.

M141 Operation and Function

- Firing the rocket:
  - Raise the weapon out and away from your body. Keep the weapon pointed downrange while pivoting your body 180 degrees to face the target, and place the weapon on your right shoulder.
  - Hold the center of the outer tube with your right hand, reach underneath the tube with your left hand, grasp the shoulder stop, and pull it rearward until it deploys from the shoulder stop cover.
  - Reach forward with your left hand, grasp the front sight cover, press down and slide it rearward.
  - With your left hand, grasp the rear sight cover, press down and slide it forward.
  - Grasp the firing mechanism cover with your right hand and rotate the cover all the way forward until the cover is flush with the outer tube. The word ARMED can be seen in red letters when the cover is opened.

If the firing mechanism cover is not flush with the launcher tube, the weapon will not arm.



M141 Operation and Function

- Pull the shoulder stop against your shoulder, and adjust the rear sight for correct range.
- Check the backblast area, and aim the weapon at the target.
- Place the fingertips of your right hand on the safety button (located on top of the firing mechanism) and press down; then place your right thumb on the red trigger button.
- Press the trigger button forward with the thumb of your right hand until the weapon fires.

  - Pressing the safety button and then the trigger button ignites the propelling charge; rocket motion begins.
  - The propelling charge burns out before the rocket's exit.
  - The rocket exits the launch tube.
  - **When the rocket has traveled 15 meters, the fuze arming cycle is complete.**
  - The rocket impacts the target and the warhead detonates.

M141 Misfire Procedures

- A misfire is a complete failure to fire caused by a procedural or mechanical failure. It may be due to a faulty firing mechanism or a faulty component in the firing circuit.
- A misfire is not dangerous, but since it cannot be immediately distinguished from a delay in the functioning of the firing mechanism (hang fire), it should be considered as a possible hang fire until such possibility has been eliminated.

M141 Misfire

- A misfire is usually caused by one of the following factors:
  - The firing mechanism may not be armed.
  - The inner tube may not be fully extended and locked.
  - The firing mechanism or the propelling charge explosive train may be faulty.

M141 Misfire Procedures

- Conduct misfire procedures as follows:
  - Keep the weapon aimed at the target.
  - Release the trigger button and safety button.
  - Resqueeze the safety button firmly, aim, and press the trigger button a second time.
  - If the weapon does not fire, release the trigger and safety buttons, and return the firing mechanism cover to the closed, SAFE position.
  - Recheck the backblast area, open the firing mechanism cover again (flush with the tube), squeeze the safety button, aim, and fire.
  - If the weapon still does not fire, release the trigger and safety buttons, and close the firing mechanism cover to the SAFE position.
  - Wait 60 seconds, remove the weapon from your shoulder, and carefully lay your weapon on the ground facing the target.
  - If the tactical situation permits, follow your unit's safety SOP and notify your supervisor.

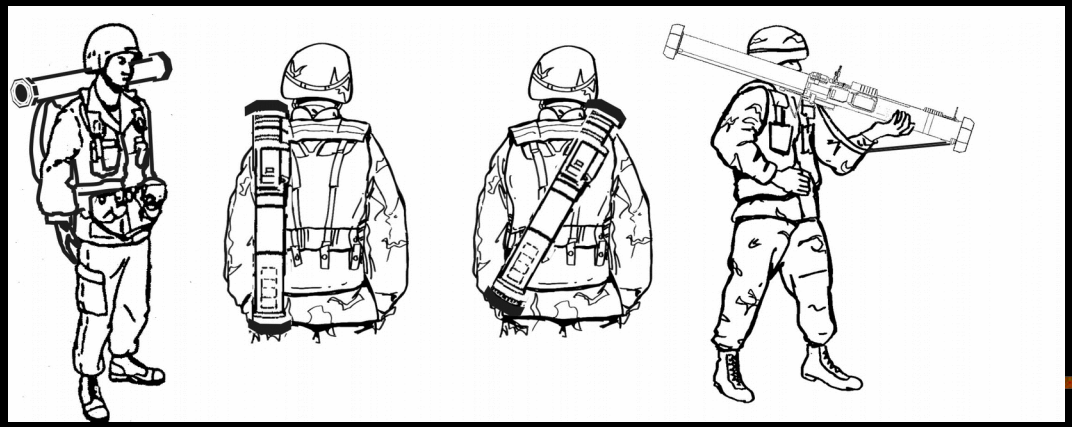
M141 Return to Carry Mode

- If the weapon is prepared for firing but is not used, it must be returned to the carry mode:
- To permit safe storage, transportation, and use at a later time.
- Assures physical integrity of the round and reduces the likelihood of environmental damage from moisture and debris intrusion.
- Perform the preparation to fire in reverse.

- Close the firing mechanism cover.
- Return the rear sight to the battle sight setting (150 meters). Fold the rear sight down and close the rear sight cover.
- Fold the front sight down and close the front sight cover.
- Store the shoulder stop. Take the weapon off your shoulder keep the weapon pointed downrange
- Grip the weapon under your left arm
- Depress and hold the tube release button with your left hand and rotate the inner tube counterclockwise with your right hand, pull the inner tube with the right hand until it is fully closed.
- Reinstall the transportation lock pin through the post just forward of the rear bumper.

M141 Carry Mode

- The M141 BDM will only be slung when in the carry configuration – never sling weapon in the extended configuration.
- If the weapon must be transported in the extended configuration, it should only be carried for a short distance, such as moving to a different firing position.
- When possible, the M141 BDM should be returned to the original overpack for storage.



M141 BDM

Marksmanship Fundamentals

M141 Marksmanship Fundamentals

- Many factors contribute to light antiarmor weapon marksmanship. Soldiers who combine these factors well, and continue to practice doing so, can retain their skills. The factors are grouped into four basic areas known as marksmanship fundamentals:
  - steady hold
  - aiming procedures
  - breath control
  - trigger manipulation

M141 Marksmanship Fundamentals

Steady Hold

- Maintaining a steady hold involves holding the launcher as steady as possible while sighting and firing.
- To maintain the proper sight picture and sight alignment until firing, hold the launcher in a tight, comfortable position so that it becomes a natural extension of your body.
- Keep your elbows close to your body to help balance the weapon and prevent jerking or flinching when you fire.
- Place your left hand, palm facing upward, under the launcher near the muzzle and grasp the launcher.
- Firmly pull the shoulder stop into your right shoulder pocket.

M141 Marksmanship Fundamentals

Aiming Procedures

Eye Placement

- Your eye should be 8 to 9 inches from the rear sight.

Sight Alignment

- Align the sights correctly with the target. Position the rear sight so that your right eye is in line with the peephole in the rear sight.
- Look through the peephole at the front sight posts.

Sight Picture

- *Stationary targets*
- *Slow-moving targets*
- *Fast-moving targets*

M141 Marksmanship Fundamentals

Trigger Manipulation

To fire the M141 BDM, the firer must apply firm and steady downward pressure to the safety trigger button with the fingers of his firing hand

M141 Integrated Act of Shooting

- Correct sight alignment is critical.
- The gunner focuses on the front sight to obtain correct sight alignment, and then places the aiming point to complete the sight picture.
- The gunner shifts or adjusts the position of the launcher as necessary.
- The whole time the gunner is pressing the trigger, he maintains the sight picture.

M141 Firing Positions

- The M141 BDM can only be fired from the right shoulder.

The M141 BDM may not be fired from the sitting position.

The M141 BDM may not be fired indoors

M141 Firing Positions

- The standing, modified standing (for combat use only), kneeling, and modified kneeling positions are the same as for the M136 AT4.
- The position must be stable and comfortable, and the most suitable for engaging the target based on the situation and terrain at hand.
- When aiming and firing, use methods of steady hold.

M141 Prone Position

- It is the most dangerous position, in regards to potential backblast injury, due to its proximity to the ground.
- It also provides the gunner a great deal of protection from enemy observation.
- Ideally, the ground should slope downward from the rear of the launcher, which reduces the effects of the backblast.
- Although the prone position is the most stable position for firing the M141 BDM, stability can be increased if support for th

M141 Prone Position

- Lie on the stomach with the body at an angle of not less than 45 degrees to the line of fire and with the body and legs to the left of the direction of fire (in order to keep clear of the backblast area).
- Ensure that neither the body nor the legs are in the backblast area.
- Move the left leg as far forward as possible without being uncomfortable, and keep the inside of both heels on the ground.
- Hold both elbows well below the launcher.
- Hold the head as steady as possible, with the right eye lined up with the sights.

DANGER

FAILURE TO MAINTAIN AN ANGLE OF NOT LESS THAN 45 DEGREES FROM THE DIRECTION OF FIRE COULD CAUSE INJURY OR DEATH TO THE FIRER.

BDM 21MM Sub Caliber Rocket

M72AS / M141BDM HA Video